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FINANCIAL INTELLIGENCE DASHBOARD — CASE STUDY REPORT

Prepared by: Precious Nwachukwu

Data Analytics | Financial Modelling | SQL | Excel Dashboarding

Executive Summary

Small business founders often measure success by **revenue**, overlooking critical financial indicators such as **profit margin**, **cost efficiency**, and **expense structure**. This case study analyses a six-month operational dataset (May–October 2025) for two businesses; Malvin Adire Stores and Skincare Studio.

Using **SQL** for transformation and **Excel** for dashboard modelling, this project provides a decision-support solution that reveals the true profitability drivers for each business unit.

Key Outcomes:

- Identified the business with the highest **profitability**, not just revenue
- Quantified top expense categories and their cost-to-income ratios
- Built scenario modelling simulations for strategic decision-making
- Delivered a founder-friendly dashboard summarizing all insights

1. Project Objective

To help small business founders gain financial clarity by quantifying:

- Profitability performance per business
- Monthly revenue and cost trends
- Cost-to-income efficiency
- Expense behaviour and operational risk areas
- Impact of financial decisions using scenario simulations

This project bridges the gap between **perceived performance (sales)** and **actual performance (profitability)**.

2. Business Problem

Founders typically overestimate profits due to:

1. Revenue-based performance assessment
2. Limited reporting structure
3. Lack of cost transparency
4. Inability to compare business units
5. Absence of predictive or scenario-based planning

This results in:

- Weak pricing decisions
- Inefficient cost allocation

- Misalignment between growth and profitability

3. Dataset Summary

A purposely designed, realistic dataset covering **May–October 2025**.

Data Fields:

- Date
- Business Name
- Income
- Expense
- Expense Category
- Net Profit
- Channel

Dataset Characteristics:

- Includes seasonality
- Contains natural fluctuations and cost shifts
- Reflects common SME operational patterns

4. Methodology

4.1 SQL Analysis

SQL was used for:

- Data aggregation
- Cleaning and validation
- Profit and margin computations
- Trend and MoM change analysis
- Expense category breakdown
- Profit contribution modelling

Key SQL outputs include:

- Monthly revenue & profit table
- Highest profit month
- MoM performance
- Cost-to-income ratio
- Profit margin per business
- Top and bottom performing expense categories

Full SQL scripts are available in the repository's /sql/ folder.

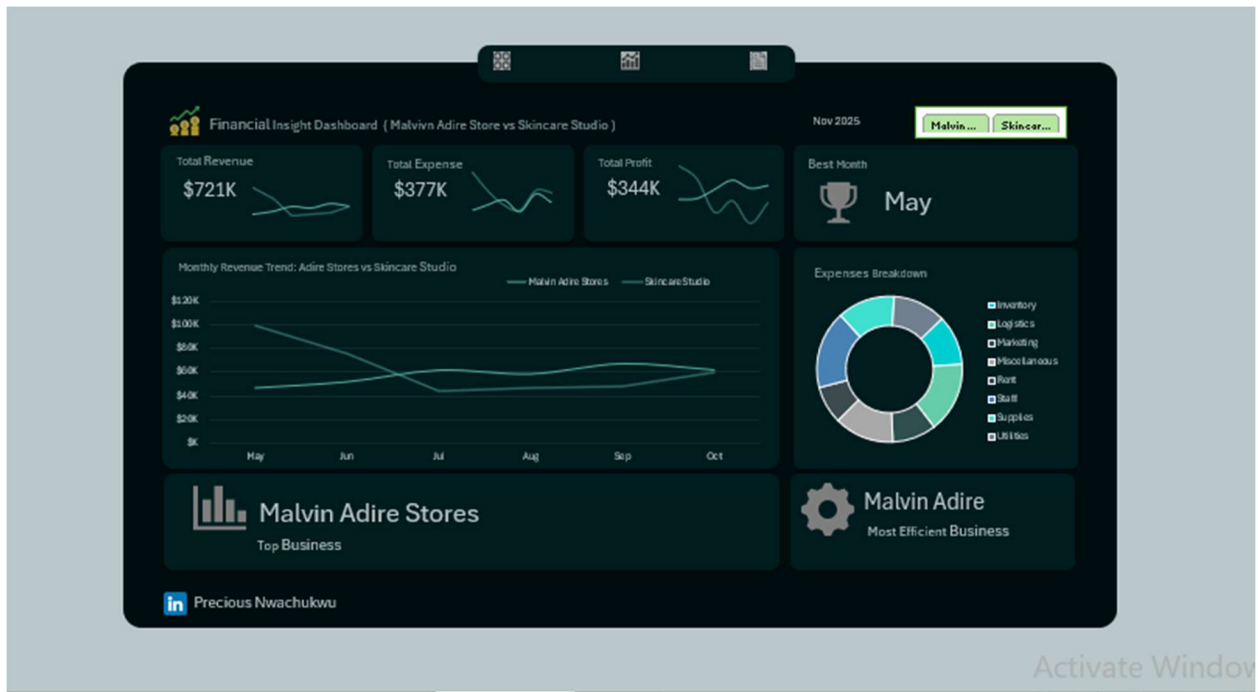
4.2 Excel Dashboard Modelling

Excel served as the reporting engine containing:

- KPI cards (Revenue, Expense, Profit, Profit Margin)
- Monthly trend charts (bar, line)
- Business comparison charts
- Expense category breakdown (pie/bar)
- Scenario simulator
 - +10% expenses
 - -20% logistics
 - +15% income
 - Dynamic recalculated profit margins

The dashboard was designed with a **consulting-style layout** — clean, minimal, and decision-oriented.

4.3 Dashboard Preview



5. Key Insights & Findings

5.1 Business Performance

- **Highest Revenue:**
Skincare Studio – \$372K
- **Highest Profit (Dollar Value):**
Malvin Adire Stores – \$184K
- **Most Efficient (Profit Margin %):**
Malvin Adire Stores – 52.90%

5.2 Monthly Performance

- **Best Month Overall: May**
Revenue: \$99K

Profit: \$47K

Strong operational efficiency across both units.

5.3 Expense Structure

Top cost drivers:

- Logistics
- Inventory
- Staff

Insight:

Skincare Studio's operating costs (\$212K) are significantly higher than Adire Stores (\$164K), compressing margins despite its higher revenue.

5.4 Scenario Analysis

Simulations revealed:

- A 15% revenue increase improves margin substantially for both businesses.
- A 20% reduction in logistics produces the **highest cost efficiency gain**.
- Total expenses are highly sensitive to Staff and Logistics categories.

6. Business Impact

This dashboard provides founders with:

- A clear view of real profitability
- Actionable cost-optimization strategies
- Transparent business unit comparison
- Tools for monthly performance reviews
- Scenario-driven financial planning

The insights support:

- Strategic pricing
- Budget reallocation
- Smarter inventory and logistics management
- More sustainable long-term financial decisions

7. Tools & Skills Demonstrated

Tools:

- SQL
- Excel
- Excel Scenario Manager

Skills:

- Financial Analysis
- Data Cleaning & Modelling
- SQL Query Development
- Business Intelligence
- Profitability Modelling
- Scenario/What-If Analysis
- Data Visualization
- Strategic Problem-Solving

8. Conclusion

This financial intelligence dashboard demonstrates how structured analytics can reveal critical operational insights that founders often miss. Through SQL-backed computations and CEO-friendly dashboarding, the project provides a scalable, repeatable framework for profitability analysis.

This work showcases both **technical expertise** and **business acumen**, positioning the analyst **Precious Nwachukwu**, as a globally competent data professional.

Appendices

- Appendix A: SQL Scripts
- Appendix B: Dashboard Screenshots
- Appendix C: Expense Category Definitions